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NOV 08 2013

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Washington County Service Authority

November 6, 2013

Mr. Allen Newman, P. E., Regional Director
Department of Environmental Quality
Southwest Regional Office
355 Deadmore Street
Abingdon, VA 24212

Re: Water Reclamation and Reuse Addendum Withdrawal, Western Washington County Water Reclamation Facility

Dear Mr. Newman:

On September 16, 2013, CHA Consulting submitted on behalf of the Washington County Service Authority (WCSA) a Virginia Pollutant Discharge Elimination System (VPDES) permit application for the planned Western Washington County Water Reclamation Facility. As described in the application, the facility will utilize processes to produce high quality effluent suitable for either discharge to surface waters or for reuse. To support future reuse opportunities, the application included the Water Reclamation and Reuse Addendum; since an end user was not identified, a reuse plan and the details of the reuse distribution system were not included in the addendum.

We understand from information provided recently by your office that a reuse plan and an end user need to be provided to include reuse provisions in the VPDES permit. We also understand that the Department can provide administrative authorization for reuse once an end user is identified and a reuse plan can be prepared and that this authorization can be provided by DEQ without WCSA incurring the costs associated with a permit modification fee. In light of the lack of a current end user and in recognition of the administrative authorization provisions, WCSA requests that the Water Reclamation and Reuse Addendum component of the application and our associated request for reuse to be incorporated in the permit be withdrawn at this time.

Please do not hesitate to contact me or Lawrence Hoffman (540) 552-5548 should you have any questions or require any additional information.

Sincerely,

Robbie Cornett
General Manager

cc: April Helbert, P.E., Manager of Engineering, Washington County Service Authority
R. Lawrence Hoffman, Vice President, CHA Consulting
Bobby R. Lane, P.E., President, The Lane Group



September 16, 2013

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Mr. Allen Newman, P. E.
Regional Director
Department of Environmental Quality
Southwest Regional Office
355 Deadmore Street
Abingdon, VA 24212

**Re: Permit Issuance, Western Washington County Water Reclamation Facility;
CHA Project Number: 23293**

Dear Allen:

Enclosed is the original signed Virginia Pollutant Discharge Elimination System (VPDES) permit application for the planned Western Washington County Water Reclamation Facility (WRF). Also enclosed is a CD with copies of the permit application forms and figures. This application is submitted by CHA Consulting on behalf of the Washington County Service Authority (WCSA).

This facility is currently in the initial design stages and will be located in southwestern Washington County. The treated effluent will be discharged to Beaver Creek near or adjacent to Route 625. In recognition of the proximity of the discharge point to downstream recreational areas, the treatment system will utilize processes to produce a high quality effluent suitable for either discharge to surface waters or for reuse. As described in the Preliminary Engineering Report (PER) provided to your office previously, the WRF will utilize an oxidation ditch for biological treatment followed by clarification, effluent filtration, and UV disinfection to produce a high quality effluent. This level of treatment will support reuse and the WCSA anticipates providing treated wastewater for industrial applications and/or irrigation once suitable users are identified. Once in place, the reuse applications will reduce the volume of effluent discharged to Beaver Creek. The proposed treatment and disinfection processes as well as the effluent reuse strategy are addressed in more detail in the PER.

As we discussed previously, the facility will be designed for 0.5 MGD capacity for the initial operations and it is expected to treat a combination of residential, commercial, and industrial wastewater. In addition to the 0.5 MGD tier for facility start-up, WCSA requests that the VPDES permit include tiers for future 1.0 MGD and 1.5 MGD design flows. This will support continued industrial development and expanded residential sewer service in the service area.

The permit application documents submitted include:

1. EPA Form 2A;
2. VPDES Sewage Sludge Permit Application Form;
3. DEQ Application Addendum;
4. Water Reclamation and Reuse Addendum; and
5. Public Notice Billing Information Form.

"Satisfying Our Clients with
Dedicated People Committed to Total Quality" | 1901 Innovation Drive, Suite 2100, Blacksburg, VA 24060
T 540.552.5548 • F 540.552.5577 • www.chacompanies.com

September 16, 2013

A check in the amount of \$21,300 will be submitted to the DEQ Receipts Control office in Richmond under separate cover to cover the fee for a municipal major facility. A copy of the fee form and check will be provided to you for your records.

The projected effluent characteristics data used to prepare this application were obtained from two wastewater treatment plants in southwest Virginia that treat domestic and commercial wastewaters and use treatment processes similar to those proposed for this facility. These include the WCSA Hall Creek WWTP and the Coeburn-Norton-Wise Regional Wastewater Treatment Authority WWTP.

As noted above, the application includes the Water Reclamation and Reuse Addendum which includes the reuse information available at this time. Additional information can be provided to DEQ once reuse participants are identified.

Upon completion of WRF construction, WCSA will submit an application for coverage under the Industrial Activity Storm Water Discharge Permit (VAR05) or a No Exposure Certification, as appropriate.

Please do not hesitate to contact me (540) 552-5548 or Robbie Cornett, Washington County Service Authority General Manager, at (276) 628-7151 should you have any questions or require any additional information.

Sincerely,



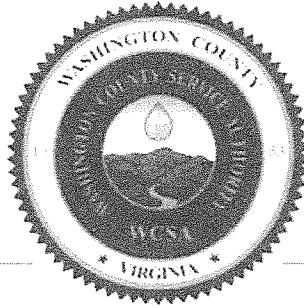
R. Lawrence Hoffman
Vice President

RLH/egl

Enclosures

cc: Robbie Cornett, General Manager, Washington County Service Authority (w/enclosures)





Washington County Service Authority

September 20, 2013

Department of Environmental Quality
Receipts Control
P.O. Box 1104
Richmond, VA 23218

Re: Permit Fee, Western Washington County Water Reclamation Facility

To Whom It May Concern:

Enclosed is the Department of Environmental Quality Water Division Permit Application Fee Form and a check in the amount of \$21,300 for the issuance of a new VPDES permit for the planned Western Washington County Water Reclamation Facility (WRF). This facility is currently in the design stages and as such, a VPDES permit number has not yet been assigned. The facility will be classified as a municipal major and will be located in southwestern Washington County.

A VPDES permit application for this facility was submitted under separate cover to the DEQ Southwest Regional Office on September 16, 2013.

Please do not hesitate to contact Lawrence Hoffman, CHA Consulting, Inc. at (540) 552-5548 or me at (276) 628-7151 should you have any questions or require any additional information.

Very truly yours,

Robert Cornett
General Manager

RC/
Enclosures

cc: Allen Newman, P.E., Regional Director, Department of Environmental Quality (w/ enclosures)
R. Lawrence Hoffman, Vice President, CHA Consulting, Inc. (w/ enclosures)

DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER DIVISION
PERMIT APPLICATION FEE FORM
EFFECTIVE JANUARY 1, 2008

INSTRUCTIONS

Applicants for individual Virginia Pollutant Discharge Elimination System (VPDES), Virginia Pollution Abatement (VPA), Virginia Water Protection (VWP), Surface Water Withdrawal (SWW), and Ground Water Withdrawal (GWW) Permits are required to pay permit application fees, except farming operations engaged in production for market. Fees are also required for registration for coverage under General Permits except for the general permits for sewage treatment systems with discharges of 1,000 gallons per day (GPD) or less and for Corrective Action Plans for leaking underground storage tanks. Except for VWP permits, fees must be paid when applications for permit issuance, reissuance* or modification are submitted. Applicants for VWP permits will be notified by the DEQ of the fee due. Applications will be considered incomplete if the proper fee is not paid and will not be processed until the fee is received. (* - the reissuance fee does not apply to VPDES and VPA permits - see the fee schedule included with this form for details.)

The permit fee schedule is included with this form. Fees for permit issuance or reissuance and for permit modification are included. Once you have determined the fee for the type of application you are submitting, complete this form. The original copy of the form and your check or money order payable to "Treasurer of Virginia" should be mailed to:

Department of Environmental Quality
Receipts Control
P.O. Box 1104
Richmond, VA 23218

A copy of the form and a copy of your check or money order should accompany the permit application. You should retain a copy for your records. Please direct any questions regarding this form or fee payment to the DEQ Office to which you are submitting your application.

APPLICANT NAME: Washington County Service Authority

ADDRESS: P.O. Box 1447

Abingdon, VA 24212

DAYTIME PHONE: 276-628-7151

Area Code

IRS Employer Identification Number (EIN):
[aka Federal Tax Identification Number (FIN)]

0540604419

FACILITY/ACTIVITY NAME: Western Washington County Water Reclamation Facility

LOCATION: Washington County, Virginia

TYPE OF PERMIT APPLIED FOR: Municipal Major
(from Fee Schedule - see back of form)

TYPE OF ACTION: ☒ New Issuance ☐ Reissuance ☐ Modification

AMOUNT OF FEE SUBMITTED (from Fee Schedule): \$21,300

EXISTING PERMIT NUMBER (if applicable): N/A

DEQ OFFICE TO WHICH APPLICATION SUBMITTED (check one)

☒ Abingdon/SWRO

☐ Harrisonburg/VRO

☐ Woodbridge/NVRO

☐ Lynchburg/BRRO-L

☐ Richmond/PRO

☐ Richmond/Headquarters

☐ Roanoke/BRRO-R

☐ Virginia Beach/TRO

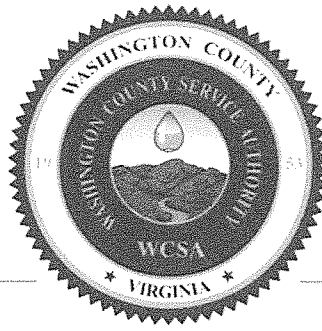
FOR DEQ USE ONLY

Date:

DC #:

Original Form and Check - DEQ Receipts Control, Richmond

Copy of Form and Copy of Check - DEQ Regional Office or Permit Program Office



Washington County Service Authority

September 20, 2013

Department of Environmental Quality
Receipts Control
P.O. Box 1104
Richmond, VA 23218

Re: Permit Fee, Western Washington County Water Reclamation Facility

To Whom It May Concern:

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A VPDES permit application for this facility was submitted under separate cover to the DEQ Southwest Regional Office on September 16, 2013.

Please do not hesitate to contact Lawrence Hoffman, CHA Consulting, Inc. at (540) 552-5548 or me at (276) 628-7151 should you have any questions or require any additional information.

Very truly yours,

A handwritten signature in black ink, appearing to read "Robert Cornett", is written over a horizontal line.

Robert Cornett
General Manager

RC/
Enclosures

cc: Allen Newman, P.E., Regional Director, Department of Environmental Quality (w/ enclosures)
R. Lawrence Hoffman, Vice President, CHA Consulting, Inc. (w/ enclosures)

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OFFICE OF FINANCIAL MGMT

FORM
2A
NPDES

NPDES FORM 2A APPLICATION OVERVIEW

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APPLICATION OVERVIEW

Form 2A has been developed in a modular format and consists of a "Basic Application Information" packet and a "Supplemental Application Information" packet. The Basic Application Information packet is divided into two parts. All applicants must complete Parts A and C. Applicants with a design flow greater than or equal to 0.1 mgd must also complete Part B. Some applicants must also complete the Supplemental Application Information packet. The following items explain which parts of Form 2A you must complete.

BASIC APPLICATION INFORMATION:

- A. **Basic Application Information for all Applicants.** All applicants must complete questions A.1 through A.8. A treatment works that discharges effluent to surface waters of the United States must also answer questions A.9 through A.12.
- B. **Additional Application Information for Applicants with a Design Flow ≥ 0.1 mgd.** All treatment works that have design flows greater than or equal to 0.1 million gallons per day must complete questions B.1 through B.6.
- C. **Certification.** All applicants must complete Part C (Certification).

SUPPLEMENTAL APPLICATION INFORMATION:

- D. **Expanded Effluent Testing Data.** A treatment works that discharges effluent to surface waters of the United States and meets one or more of the following criteria must complete Part D (Expanded Effluent Testing Data):
 - 1. Has a design flow rate greater than or equal to 1 mgd,
 - 2. Is required to have a pretreatment program (or has one in place), or
 - 3. Is otherwise required by the permitting authority to provide the information.
- E. **Toxicity Testing Data.** A treatment works that meets one or more of the following criteria must complete Part E (Toxicity Testing Data):
 - 1. Has a design flow rate greater than or equal to 1 mgd,
 - 2. Is required to have a pretreatment program (or has one in place), or
 - 3. Is otherwise required by the permitting authority to submit results of toxicity testing.
- F. **Industrial Discharges and RCRA/CERCLA Wastes.** A treatment works that accepts process wastewater from any significant industrial users (SIUs) or receives RCRA or CERCLA wastes must complete Part F (Industrial User Discharges and RCRA/CERCLA Wastes). SIUs are defined as:
 - 1. All industrial users subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations (CFR) 403.6 and 40 CFR Chapter I, Subchapter N (see instructions); and
 - 2. Any other industrial user that:
 - a. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions); or
 - b. Contributes a process wastewater that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the treatment plant; or
 - c. Is designed as an SIU by the control authority.
- G. **Combined Sewer Systems.** A treatment works that has a combined sewer system must complete Part G (Combined Sewer Systems).

ALL APPLICANTS MUST COMPLETE PART C (CERTIFICATION)

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LOCAL GOVERNMENT ORDINANCE FORM

For new VPDES permit application

In reference to the request from: Mr. Robert C.H. Cornett, General Manager, Washington County Service Authority

For certification of a discharge at: Western Washington County Water Reclamation Facility
Off Bordwine Road, Bristol, VA

I hereby certify,

X (1) That the proposed location, and operation of the facility is consistent with all ordinances adopted pursuant to Chapter 22 (§15.2-2200 et seq.) of Title 15.2 of the Code of Virginia

OR

___ (2) That no local ordinances are in effect pursuant to Chapter 22 (§15.2-2200 et seq.) of Title 15.2 of the Code of Virginia

OR

___ (3) That the proposed location and operation of the facility is not consistent with all ordinances adopted pursuant to Chapter 22 (§15.2-2200 et seq.) of Title 15.2 of the Code of Virginia


Signature

Jason N. Berry

Printed Name

County Administrator

Title

April 16, 2015

Date

BASIC APPLICATION INFORMATION

PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:

All treatment works must complete questions A.1 through A.8 of this Basic Application Information packet.

A.1 Facility Information.

Facility Name Western Washington County Water Reclamation Facility
Mailing Address 25122 Regal Drive
Abingdon, VA 24211
Contact Person Robert C.H. Cornett
Title General Manager
Telephone Number 276-628-7151
Facility Address Off of Bordwine Road, Bristol, VA 24202
(not P.O. Box) _____

A.2. Applicant Information. If the applicant is different from the above, provide the following:

Applicant Name Washington County Service Authority
Mailing Address 25122 Regal Drive
Abingdon, VA 24211
Contact Person Robert C.H. Cornett
Title General Manager
Telephone number 276-628-7151

Is the applicant the owner or operator (or both) of the treatment works?

☒ owner ☒ operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

☐ facility ☒ applicant

A.3 Existing Environmental Permits. Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

NPDES None
UIC _____
RCRA _____

PSD _____
Other _____
Other _____

A.4 Collection System Information. Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.).

Name	Population Served	Type of Collection System	Ownership
<u>Western Washington Co.</u>	<u>1,500 (est.)</u>	<u>Separate</u>	<u>Municipal</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Total population served	<u>1,500 (est.)</u>		

X No

If yes, describe the mean(s) by which the wastewater from the treatment works is discharged or transported to the other treatment works (e.g., tank truck, pipe).

Transporter Name _____
Mailing Address _____

Contact Person _____
Title _____
Telephone Number _____

For each treatment works that receives this discharge, provide the following:

Transporter Name _____
Mailing Address _____

Contact Person _____
Title _____
Telephone Number _____

If known, provide the NPDES permit number of the treatment works that receives this discharge. _____

Provide the average daily flow rate from the treatment works into the receiving facility. _____ mgd

3. Does the treatment works discharge or dispose of its wastewater in a manner not included in A.8.a through A.8.d above (e.g., underground percolation, well injection)? _____ Yes X No

If yes, provide the following for each disposal method:

Description of method (including location and size of site(s) if applicable):

Annual daily volume disposed of by this method: _____

Is disposal through this method _____ continuous or _____ intermittent?

WASTEWATER DISCHARGES:

If you answered "yes" to question A.8.a, complete questions A.9 through A.12 once for each outfall (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. If you answered "no" to question A.8.a, go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."

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A.9 Description of Outfall.

MAY 22 2015

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- a. Outfall number 001
- b. Location
- | | |
|--------------------------------|-------------------------------|
| (City or town, if applicable) | (Zip Code) |
| <u>Washington</u> | <u>Virginia</u> |
| (County) | (State) |
| <u>36° 39' 25" (projected)</u> | <u>82° 6' 15" (projected)</u> |
| (Latitude) | (Longitude) |
- c. Distance from shore (if applicable) 0 (bank discharge) ft.
- d. Depth below surface (if applicable) 0 (bank discharge) ft.
- e. Average daily flow rate NA mgd
- f. Does this outfall have either an intermittent or periodic discharge? Yes X No (go to A.9.g)
- Number of times per year discharge occurs: _____
- Average duration of each discharge: _____
- Average flow per discharge: _____ mgd
- Months in which discharge occurs: _____
- g. Is outfall equipped with a diffuser? Yes X No

A.10. Description of Receiving Waters

- a. Name of receiving water Beaver Creek
- b. Name of watershed (if known) Tennessee-Big Sandy River Basin
- United States Soil Conservation Service 14-digit watershed code (if known): _____
- c. Name of State Management/River Basin (if known): _____
- United States Geological Survey 8-digit hydrological cataloging unit code (if known): 06010102
- d. Critical low flow of receiving stream (if applicable):
- acute NA cfs (1Q10) chronic NA cfs (7Q10)
- e. Total hardness of receiving stream at critical low flow (if applicable): NA mg/l of CaCO₃

A.11. Description of Treatment

a. What levels of treatment are provided? Check all that apply.

☒ Primary ☒ Secondary
☒ Advanced ☐ Other. Describe: *Effluent filtration

b. Indicate the following removal rates (as applicable)

Design BOD ₅ removal <u>or</u> Design CBOD ₅ removal	<u>94</u>	%
Design SS removal	<u>94</u>	%
Design P removal	<u>N/A</u>	%
Design N removal	<u>N/A</u>	%
Other _____	<u>N/A</u>	%

c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe.

UV

If disinfection is by chlorination, is dechlorination used for this outfall? ☐ Yes ☐ No

d. Does the treatment plant have post aeration? ☒ Yes ☐ No

* if required

A.12.

Effluent Testing Information. All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.

Outfall number: 001

Data from Hall Creek WWTP DMRs and operation logs (January 2007 - September 2011) as reported on their latest permit application. The fecal coliform data is from the CNW WWTP DMRs collected January 2008 through July 2011. The Western Washington County WRF is expected to be similar.

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	Value	Units	Value	Units	Number of Samples
pH (Minimum)	6.7	s.u.			
pH (Maximum)	7.8	s.u.			
Flow Rate	0.76	mgd	0.33	mgd	Cont.
Temperature (Winter) (Jan-Mar)	15.0	°C	9.7	°C	15
Temperature (Summer) (July-Sept)	27.0	°C	22	°C	15

* For pH please report a minimum and a maximum daily value

POLLUTANT		MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML/MDL
		Conc.	Units	Conc.	Units	Number of Samples		
BIOCHEMICAL OXYGEN	BOD-5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Demand (Report one)	CBOD-5	16.1	mg/L	<5.0	mg/L	268	EPA 405.1	5.0 mg/L
FECAL COLIFORM (E.coli)		21.8	MPN/100 mls	4.6	MPN/100 mls	26	SM 20. 9223B	1 MPN/100mls
TOTAL SUSPENDED SOLIDS (TSS)		27.8	mg/L	3.8	mg/L	268	EPA 160.2	1.0 mg/L

END OF PART A.

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

BASIC APPLICATION INFORMATION

PART B. ADDITIONAL APPLICATION INFORMATION FOR APPLICANTS WITH A DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD (100,000 gallons per day).

All applicants with a design flow rate ≥ 0.1 mgd must answer questions B.1 through B.6. All others go to Part C (Certification)

Inflow and Infiltration. Estimate the average number of gallons per day that flow into the treatment works from inflow and/or

B.1. infiltration.

50,000 gpd based on size of future service area

Briefly explain any steps underway or planned to minimize inflow and infiltration.

To be determined.

B.2.

Topographic Map. Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information. (You may submit more than one map if one map does not show the entire area.) See Figure 1 for the planned location.

- The area surrounding the treatment plant, including all unit processes.
- The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.
- Each well where wastewater from the treatment plant is injected underground. N/A
- Well, springs, other surface water bodies, and drinking water wells that are: 1) within 1/4 mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.
- Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed.
- If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored, and/or disposed. N/A

B.3. **Process Flow Diagram or Schematic.** Provide a diagram showing the processes of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system. Also provide a water balance showing all treatment units, including disinfection (e.g., chlorination and dechlorination). The water balance must show daily average flow rates at influent and discharge points and approximate daily flow rates between treatment units. Include a brief narrative description of the diagram.

See attached Figure 2. This figure is a general schematic of the proposed system for the Western Washington County WRF. A narrative description is provided on the following page.

B.4. **Operation/Maintenance Performed by Contractor(s).**

Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor?

____ Yes ☒ No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name: _____

Mailing Address: _____

Telephone Number: _____

Responsibilities of Contractor: _____

B.5. **Scheduled Improvements and Schedules of Implementation.** Provide information on any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses to question B.5 for each. (If none, go to question B.6.)

- a. List the outfall number (assigned in question A.9) for each outfall that is covered by this implementation schedule.

- b. Indicate whether the planned improvements or implementation schedule are required by local, State, or Federal agencies.

____ Yes ____ No

WESTERN WASHINGTON COUNTY WATER RECLAMATION FACILITY

TREATMENT PROCESS NARRATIVE

Background

The Preliminary Engineering Report (PER) developed for the proposed Western Washington County Water Reclamation Facility identified and evaluated several wastewater treatment alternatives. In recognition of the size of the receiving stream, the proximity of the discharge to downstream recreational areas, and the desire to support effluent reuse applications, a treatment process that produces high quality effluent was recommended. As depicted in the process flow diagram (Figure 2) the proposed treatment processes include the following main component processes.

1. Influent Screening
2. Grit Removal
3. Biological Treatment (Oxidation Ditch)
4. Clarification
5. Filtration
6. Ultraviolet Disinfection
7. Effluent Flow Monitoring
8. Post Aeration (if needed)
9. Biosolids Stabilization (Aerobic Digestion)
10. Solids Dewatering

The PER evaluated several alternatives for both biological processes and the additional filtration for reuse and recycling. The sections below identify the options determined in the PER to be the best options and describes the reasons these were chosen.

Biological Process: Based on the ranking in the PER, an oxidation ditch was chosen as the preferred option. In an oxidation ditch, wastewater flows through a continuous loop, typically in an oval shaped tank, where mixing and aeration is accomplished with brush or disk type aerators. The loop may be divided into aerobic and anoxic zones for nutrient removal. The solids residence time and detention times are typically very high resulting in good removal of the target elements; however, the operational costs are typically higher than conventional activated sludge. The biological solids are settled and returned to the oxidation ditch utilizing standard secondary clarifiers.

Filtration: Recycled water will require the addition of a tertiary filter. Cloth filters are low in maintenance, require a relatively small footprint, have low head requirements and low backwash rates, yet are capable of producing a high quality effluent that is readily disinfected using UV light.

UV Disinfection: Disinfection of the treated effluent will be accomplished using an ultraviolet (UV) light system. UV light is a very effective technique that does not require the storage or use of chlorine and sulfur dioxide (or other oxidants and reducing agents), thereby eliminating the risks to human health and the environment associated with accidental releases of these chemicals. In addition, the use of UV disinfection eliminates the formation of potentially toxic disinfection by-products typically formed when chlorine or other halogens are used for disinfection of wastewater.

Summary of process

A summary of the proposed treatment process is as follows. Influent from domestic, commercial and industrial sources will flow to the plant through a gravity collection system and will initially pass through the influent screens and grit removal equipment to remove the largest solids. The wastewater will then be pumped to the oxidation ditch where it will undergo biological treatment. The biologically treated wastewater will be decanted to the secondary clarifiers for further treatment and a portion of the activated sludge will be directed to an aerobic digester where it is stabilized and then dewatered for landfill disposal. The supernatant will be pumped back to the headworks for treatment. The remaining portion of the activated sludge from the secondary clarifiers will be returned to the aerobic digester. The wastewater from the secondary clarifiers will be filtered through a cloth tertiary filter system and will then pass through a UV disinfection system prior to being discharged through Outfall 001 to Beaver Creek or directed to a reclaimed water distribution system. If determined necessary, the treated effluent may be aerated using a cascade aeration system.

c. If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

N/A

d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible. All dates are estimates and subject to change.

Implementation Stage	Schedule MM/DD/YYYY	Actual Completion MM/DD/YYYY
- Begin construction	3 / / 15	/ /
- End construction	9 / / 16	/ /
- Begin discharge	9 / / 16	/ /
- Attain operational level	9 / / 16	/ /

e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained?

Yes

No

Describe briefly:

This application is for the initial VPDES permit and CTC.

B.6. EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY).

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section.

All information reported must be based on data collected through analyses conducted using 40 CFR Part 136 methods. In addition, these data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall number: 001

Ammonia, TRC, and DO data are from Hall Creek WWTP DMRs (1/08 - 7/11). TKN, Nitrate + Nitrite, Oil and Grease, Total Phosphorus, and Total Dissolved Solids are from the CNW WWTP permit application. The Western Washington County WRF is expected to be similar. The flow values used to calculate the maximum and average loadings are from the current collection system and area 500,000 gpd and 330,000 gpd respectively.

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
AMMONIA (as N)	18.3	mg/L	34.6	kg/D	0.38	mg/L	0.47	kg/D	217	SM 4500NH ₃ ,F	0.20 mg/L
CHLORINE (TOTAL RESIDUAL, TRC)	<0.1	mg/L	<0.2	kg/D	<0.1	mg/L	<0.1	kg/D	5,202	EPA 330.5	0.1 mg/L
DISSOLVED OXYGEN (1) Minimum value	5.6 ⁽¹⁾	mg/L	10.6	kg/D	8.0	mg/L	10.0	kg/D	1,734	EPA 360.1	1.0 mg/L
TOTAL KJELDAHL NITROGEN (TKN)	2.0	mg/L	3.8	kg/D	2.0	mg/L	23.0	kg/D	1	SM 4500N,C	0.5 mg/L
NITRATE PLUS NITRITE NITROGEN	4.2	mg/L	7.9	kg/D	4.2	mg/L	48.3	kg/D	1	SM18/4500 NO ₃ F	0.20 mg/L
OIL and GREASE	<5.0	mg/L	<9.5	kg/D	<5.0	mg/L	<57.5	kg/D	1	EPA 1664A	5.0 mg/L
PHOSPHORUS (Total)	0.053	mg/L	0.10	kg/D	0.053	mg/L	0.61	kg/D	1	SM18/4500-P E	0.050 mg/L
TOTAL DISSOLVED SOLIDS (TDS)	277	mg/L	524	kg/D	277	mg/L	3,190	kg/D	1	SM18/2540C	25 mg/L
OTHER	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

END OF PART B.

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

PART C. CERTIFICATION

Indicate which parts of Form 2A you have completed and are submitting:

ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION

Name and official title **Robert C.H. Cornett, General Manager**

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

SEND COMPLETED FORMS TO:

SUPPLEMENTAL APPLICATION INFORMATION

PART D. EXPANDED EFFLUENT TESTING DATA NOT APPLICABLE

Refer to the directions on the cover page to determine whether this section applies to the treatment works.

Effluent Testing: 1.0 mgd and Pretreatment Treatment Works. If the treatment works has a design flow greater than or equal to 1.0 mgd or it has (or is required to have) a pretreatment program, or is otherwise required by the permitting authority to provide the data, then provide effluent testing data for the following pollutants. Provide the indicated effluent testing information and any other information required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analyses conducted using 40 CFR Part 136 methods. In addition, these data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall number: (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE		DISCHARGE		AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		

METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS.

ANTIMONY											
ARSENIC											
BERYLLIUM											
CADMIUM											
CHROMIUM											
COPPER											
LEAD											
MERCURY											
NICKEL											
SELENIUM											
SILVER											
THALLIUM											
ZINC											
CYANIDE											
TOTAL PHENOLIC COMPOUNDS											
HARDNESS (As CaCO ₃)											

Reclamation Facility; Permit Number Not Assigned

Outfall number: (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
VOLATILE ORGANIC COMPOUNDS.											
ACROLEIN											
ACRYLONITRILE											
BENZENE											
BROMOFORM											
CARBON TETRACHLORIDE											
CHLOROBENZENE											
CHLORODIBROMO-METHANE											
CHLOROETHANE											
2-CHLORO-ETHYL VINYL ETHER											
CHLOROFORM											
DICHLOROBROMO-METHANE											
1,1-DICHLOROETHANE											
1,2-DICHLOROETHANE											
TRANS-1,2-DICHLORO-ETHYLENE											
1,1-DICHLOROETHYLENE											
1,2-DICHLOROPROPANE											
1,3-DICHLORO-PROPYLENE											
ETHYLBENZENE											
METHYL BROMIDE											
METHYL CHLORIDE											
METHYLENE CHLORIDE											
1,1,2,2-TETRACHLORO-ETHANE											
TETRACHLORO-ETHYLENE											
TOLUENE											

Outfall number: (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
1,1,1-TRICHLOROETHANE											
1,1,2-TRICHLOROETHANE											
TRICHLORETHYLENE											
VINYL CHLORIDE											

Use this space (or a separate sheet) to provide information on other volatile organic compounds requested by the permit writer.

--	--	--	--	--	--	--	--	--	--	--	--

ACID-EXTRACTABLE COMPOUNDS

P-CHLORO-M-CRESOL											
2-CHLOROPHENOL											
2,4-DIMETHYLPHENOL											
4,6-DINITRO-O-CRESOL											
2,4-DINITROPHENOL											
2-NITROPHENOL											
4-NITROPHENOL											
PENTACHLOROPHENOL											
PHENOL											
2,4,6-TRICHLOROPHENOL											

Use this space (or a separate sheet) to provide information on other acid-extractable compounds requested by the permit writer.

--	--	--	--	--	--	--	--	--	--	--	--

BASE-NEUTRAL COMPOUNDS.

ACENAPHTHENE											
ACENAPHTHYLENE											
ANTHRACENE											
BENZIDINE											
BENZO(A)ANTHRACENE											
BENZO(A)PYRENE											

Facility; Permit Number Not Assigned

OMB Number 2040-0086

Outfall number: (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
3,4 BENZO-FLUORANTHENE											
BENZO(GHI)PERYLENE											
BENZO(K)FLUORANTHENE											
BIS (2-CHLOROETHOXY) METHANE											
BIS (2-CHLOROETHYL)-ETHER											
BIS (2-CHLOROISO-PROPYL) ETHER											
BIS (2-ETHYLHEXYL) PHTHALATE											
4-BROMOPHENYL PHENYL ETHER											
BUTYL BENZYL PHTHALATE											
2-CHLORONAPHTHALENE											
1-CHLORPHENYL PHENYL ETHER											
CHRYSENE											
DI-N-BUTYL PHTHALATE											
DI-N-OCTYL PHTHALATE											
DIBENZO(A,H) ATHRACENE											
1,2-DICHLOROBENZENE											
1,3-DICHLOROBENZENE											
1,4-DICHLOROBENZENE											
3,3-DICHLOROBENZIDINE											
DIETHYL PHTHALATE											
DIMETHYL PHTHALATE											
2,4-DINITROTOLUENE											
2,6-DINITROTOLUENE											
1,2-DIPHENYLHYDRAZINE											

Outfall number: (Complete once for each outfall discharging effluent to waters of the United States.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	Conc.	Units	Mass	Units	Conc.	Units	Mass	Units	Number of Samples		
FLUORANTHENE											
FLUORENE											
HEXACHLOROBENZENE											
HEXACHLOROBUTADIENE											
HEXACHLOROCYCLO-PENTADIENE											
HEXACHLOROETHANE											
INDENO(1,2,3-CD)PYRENE											
ISOPHORONE											
NAPHTHALENE											
NITROBENZENE											
N-NITROSODI-N-PROPYLAMINE											
N-NITROSODI-PHENYLAMINE											
PHENANTHRENE											
PYRENE											
1,2,4-TRICHLOROBENZENE											

Use this space (or a separate sheet) to provide information on other base-neutral compounds requested by the permit writer.

--	--	--	--	--	--	--	--	--	--	--	--

Use this space (or a separate sheet) to provide information on other pollutants (e.g., pesticides) requested by the permit writer.

--	--	--	--	--	--	--	--	--	--	--	--

END OF PART D.**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM
2A YOU MUST COMPLETE**

SUPPLEMENTAL APPLICATION INFORMATION**PART E. TOXICITY TESTING DATA NOT APPLICABLE**

POTWs meeting one or more of the following criteria must provide the results of whole effluent toxicity tests for acute or chronic toxicity for each of the facility's discharge points: 1) POTWs with a design flow rate greater than or equal to 1.0 mgd; 2) POTWs with a pretreatment program (or those that are required to have one under 40 CFR Part 403); or 3) POTWs required by the permitting authority to submit data for these parameters.

- At a minimum, these results must include quarterly testing for a 12-month period within the past 1 year using multiple species (minimum of two species), or the results from four tests performed at least annually in the four and one-half years prior to the application, provided the results show no appreciable toxicity, and testing for acute and/or chronic toxicity, depending on the range of receiving water dilution. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136.
- In addition, submit the results of any other whole effluent toxicity tests from the past four and one-half years. If a whole effluent toxicity test conducted during the past four and one-half years revealed toxicity, provide any information on the cause of the toxicity or any results of a toxicity reduction evaluation, if one was conducted.
- If you have already submitted any of the information requested in Part E, you need not submit it again. Rather, provide the information requested in question E.4 for previously submitted information. If EPA methods were not used, report the reasons for using alternate methods. If test summaries are available that contain all of the information requested below, they may be submitted in place of Part E.

If no biomonitoring data is required, do not complete Part E. Refer to the Application Overview for directions on which other sections of the form to complete.

E.1. Required Tests.

Indicate the number of whole effluent toxicity tests conducted in the past four and one-half years.

___ chronic ___ acute

E.2. Individual Test Data. Complete the following chart for each whole effluent toxicity test conducted in the last four and one-half years. Allow one column per test (where each species constitutes a test). Copy this page if more than three tests are being reported.

Test number: _____ Test number: _____ Test number: _____

a. Test information.

Test species & test method number			
Age at initiation of test			
Outfall number			
Dates sample collected			
Date test started			
Duration			

b. Give toxicity test methods followed.

Manual title			
Edition number and year of publication			
Page number(s)			

c. Give the sample collection method(s) used. For multiple grab samples, indicate the number of grab samples used.

24-Hour composite			
Grab			

d.. Indicate where the sample was taken in relation to disinfection. (Check all that apply for each)

Before disinfection			
After disinfection			
After dechlorination			

Test number: _____ Test number: _____ Test number: _____

e. Describe the point in the treatment process at which the sample was collected.

Sample was collected:

f. For each test, include whether the test was intended to assess chronic toxicity, acute toxicity, or both.

Chronic toxicity			
Acute toxicity			

g. Provide the type of test performed.

Static			
Static-renewal			
Flow-through			

h. Source of dilution water. If laboratory water, specify type; if receiving water, specify source.

Laboratory water			
Receiving water			

i. Type of dilution water. If salt water, specify "natural" or type of artificial sea salts or brine used.

Fresh water			
Salt Water			

j. Give the percentage effluent used for all concentrations in the test series

k. Parameters measured during the test. (State whether parameter meets test methods specifications)

pH			
Salinity			
Temperature			
Ammonia			
Dissolved oxygen			

l. Test Results

Acute:

Percent survival in 100% effluent	%	%	%
LC ₅₀			
95% C.I.	%	%	%
Control percent survival	%	%	%
Other (describe)			

Chronic

NOEC	%	%	%
IC ₂₅	%	%	%
Control percent survival	%	%	%
Other (describe)			

m. Quality Control/Quality Assurance

Is reference toxicant data available?

Was reference toxicant test
within acceptable bounds?What date was reference
toxicant test run
(MM/DD/YYYY)?

Other (describe)

E.3. Toxicity Reduction Evaluation. Is the treatment works involved in a Toxicity Reduction Evaluation?

____ Yes ____ No

If yes, describe:

E.4. Summary of Submitted Biomonitoring Text Information. If you have submitted biomonitoring test information, or information regarding the cause of toxicity, within the past four and one-half years, provide the dates the information was submitted to the permitting authority and a summary of the results.

Date submitted: _____ (MM/DD/YYYY)

Summary of results: (see instructions)

END OF PART E.**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM
2A YOU MUST COMPLETE**

SUPPLEMENTAL APPLICATION INFORMATION**PART F. INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES NOT APPLICABLE**

All treatment works receiving discharges from significant industrial users or which receive RCRA, CERCLA, or other remedial wastes must complete Part F.

GENERAL INFORMATION:

F.1. Pretreatment Program. Does the treatment works have, or is it subject to, an approved pretreatment program?

_____ Yes _____ No

F.2. Number of Significant Industrial Users (SIUs) and Categorical Industrial Users (CIUs). Provide the number of each of the following types of industrial users that discharge to the treatment works.

a. Number of non-categorical SIUs. _____

b. Number of CIUs. _____

SIGNIFICANT INDUSTRIAL USER INFORMATION:

Supply the following information for each SIU. If more than one SIU discharges to the treatment works, copy questions F.3 through F.8 and provide the information requested for each SIU.

F.3. Significant Industrial User Information. Provide the name and address of each SIU discharging to the treatment works. Submit additional pages as necessary.

Name: _____

Mailing Address: _____

F.4. Industrial Processes. Describe all of the industrial processes that affect or contribute to the SIU's discharge.

F.5. Principal Product(s) and Raw Material(s). Describe all of the principal processes and raw materials that affect or contribute to the SIU's discharge.

Principal product(s): _____

Raw material(s): _____

F.6. Flow Rate.

a. Process wastewater flow rate. Indicate the average daily volume of process wastewater discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

_____ gpd (_____ continuous or _____ intermittent)

b. Non-process wastewater flow rate. Indicate the average daily volume of non-process wastewater flow discharged into the collection system in gallons per day (gpd) and whether the discharge is continuous or intermittent.

_____ gpd (_____ continuous or _____ intermittent)

F.7. Pretreatment Standards. Indicate whether the SIU is subject to the following:

a. Local limits _____ Yes _____ No

b. Categorical pretreatment standards _____ Yes _____ No

If subject to categorical pretreatment standards, which category and subcategory?

F.8. Problems at the Treatment Works Attributed to Waste Discharged by the SIU. Has the SIU caused or contributed to any problems (e.g., upsets, interference) at the treatment works in the past three years?

☐ Yes ☐ No If yes, describe each episode.

RCRA HAZARDOUS WASTE RECEIVED BY TRUCK, RAIL, OR DEDICATED PIPELINE:

F.9. RCRA Waste. Does the treatment works receive or has it in the past three years received RCRA hazardous waste by truck, rail, or dedicated pipe?

☐ Yes ☐ No (go to F.12.)

F.10. Waste Transport. Method by which RCRA waste is received (check all that apply):

☐ Truck ☐ Rail ☐ Dedicated Pipe

F.11. Waste Description. Give EPA hazardous waste number and amount (volume or mass, specify units).

EPA Hazardous Waste Number

Amount

Units

<u>EPA Hazardous Waste Number</u>	<u>Amount</u>	<u>Units</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

CERCLA (SUPERFUND) WASTEWATER, RCRA REMEDIATION/CORRECTIVE ACTION WASTEWATER, AND OTHER REMEDIAL ACTIVITY WASTEWATER:

F.12. Remediation Waste. Does the treatment works currently (or has it been notified that it will) receive waste from remedial activities?

☐ Yes (complete F.13 through F.15.) ☐ No

Provide a list of sites and the requested information (F.13 - F.15.) for each current and future site.

F.13. Waste Origin. Describe the site and type of facility at which the CERCLA/RCRA/or other remedial waste originates (or is expected to originate in the next five years).

F.14. Pollutants. List the hazardous constituents that are received (or are expected to received). Include data on volume and concentration, if known. (Attach additional sheets if necessary).

F.15. Waste Treatment.

a. Is this waste treated (or will it be treated) prior to entering the treatment works?

☐ Yes ☐ No

If yes, describe the treatment (provide information about the removal efficiency):

b. Is the discharge (or will the discharge be) continuous or intermittent?

☐ Continuous ☐ Intermittent If intermittent, describe discharge schedule.

END OF PART F.

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE

VPDES Permit Application Addendum

1. Entity to whom the permit is to be issued: Washington County Service Authority

Who will be legally responsible for the wastewater treatment facilities and compliance with the permit? This may or may not be the facility or property owner.

2. Is this facility located within city or town boundaries? Yes ☐ No ☒

3. Provide the tax map parcel number for the land where the discharge is located. Planned location: 142-A-12

4. For the facility to be covered by this permit, how many acres will be disturbed during the next five years due to new construction activities? ~5 acres

5. What is the design average effluent flow of this facility? 0.5 MGD

For industrial facilities, provide the max. 30-day average production level, include units:

In addition to the design flow or production level, should the permit be written with limits for any other discharge flow tiers or production levels? Yes ☒ No ☐

If "Yes", please identify the other flow tiers (in MGD) or production levels:

1.0 MGD and 1.5 MGD

Please consider the following questions for both the flow tiers and the production levels (if applicable): Do you plan to expand operations during the next five years? Is your facility's design flow considerably greater than your current flow?

6. Nature of operations generating wastewater:

Treatment of domestic and industrial wastewater

50 % of flow from domestic connections/sources

Number of private residences to be served by the treatment works: _____

50 % of flow from non-domestic connections/sources

7. Mode of discharge: ☒ Continuous ☐ Intermittent ☐ Seasonal

Describe frequency and duration of intermittent or seasonal discharges:

8. Identify the characteristics of the receiving stream at the point just above the facility's discharge point:

☒ Permanent stream, never dry

☐ Intermittent stream, usually flowing, sometimes dry

☐ Ephemeral stream, wet-weather flow, often dry

☐ Effluent-dependent stream, usually or always dry without effluent flow

☐ Lake or pond at or below the discharge point

☐ Other: _____

9. Approval Date(s):

O & M Manual NA Sludge/Solids Management Plan NA

Have there been any changes in your operations or procedures since the above approval dates? Yes ☐ No ☐

SCREENING INFORMATION

This application is divided into sections. Sections A pertain to all applicants. The applicability of Sections B, C and D depend on your facility's sewage sludge use or disposal practices. The information provided on this page will help you determine which sections to fill out.

1. All applicants must complete Section A (General Information).

2. Will this facility generate sewage sludge? ☒ Yes ☐ No

Will this facility derive a material from sewage sludge? ☐ Yes ☒ No

If you answered Yes to either, complete Section B (Generation Of Sewage Sludge Or Preparation Of A Material Derived From Sewage Sludge).

3. Will this facility apply sewage sludge to the land? ☐ Yes ☒ No

Will sewage sludge from this facility be applied to the land? ☐ Yes ☒ No

If you answered No to both questions above, skip Section C.

If you answered Yes to either, answer the following three questions:

a. Will the sewage sludge from this facility meet the ceiling concentrations, pollutant concentrations, Class A pathogen reduction requirements and one of the vector attraction reduction requirements 1-8, as identified in the instructions?

☐ Yes ☐ No

b. Will sewage sludge from this facility be placed in a bag or other container for sale or give-away for application to the land? ☐ Yes ☐ No

c. Will sewage sludge from this facility be sent to another facility for treatment or blending? ☐ Yes ☐ No

If you answered No to all three, complete Section C (Land Application Of Bulk Sewage Sludge).

If you answered Yes to a, b or c, skip Section C.

4. Do you own or operate a surface disposal site? ☐ Yes ☒ No

If Yes, complete Section D (Surface Disposal).

SECTION A. GENERAL INFORMATION

All applicants must complete this section.

1. Facility Information.

- a. Facility name: **Western Washington County Water Reclamation Facility**
- b. Contact person: **Mr. Robert C.H. Cornett**
Title: **General Manager**
Phone: **(276) 628-7151**
- c. Mailing address:
Street or P.O. Box: **25122 Regal Drive**
City or Town: **Abingdon** State: **Virginia** Zip: **24211**
- d. Facility location:
Street or Route #: **off of Bordwine Road**
County: **Washington**
City or Town: **Bristol** State: **Virginia** Zip: **24202**
- e. Is this facility a Class I sludge management facility? ___ Yes **X** No
- f. Facility design flow rate: **0.5** mgd
- g. Total population served: **~1,500**
- h. Indicate the type of facility:
X Publicly owned treatment works (POTW)
___ Privately owned treatment works
___ Federally owned treatment works
___ Blending or treatment operation
___ Surface disposal site
___ Other (describe):

2. Applicant Information. If the applicant is different from the above, provide the following:

- a. Applicant name:
- b. Mailing address:
Street or P.O. Box:
City or Town: _____ State: _____ Zip: _____
- c. Contact person:
Title:
Phone:
- d. Is the applicant the owner or operator (or both) of this facility?
___ owner ___ operator
- e. Should correspondence regarding this permit be directed to the facility or the applicant? (Check one)
___ facility ___ applicant

3. Permit Information.

- a. Facility's VPDES permit number (if applicable): **Does not currently have a permit**
- b. List on this form or an attachment, all other federal, state or local permits or construction approvals received or applied for that regulate this facility's sewage sludge management practices:
Permit Number: _____ Type of Permit: _____
N/A

4. Indian Country. Does any generation, treatment, storage, application to land or disposal of sewage sludge from this facility occur in Indian Country? ___ Yes **X** No If yes, describe:

FACILITY NAME: Western Washington County Water Reclamation Facility **VPDES PERMIT NUMBER:** No permit

5. Topographic Map. Provide a topographic map or maps (or other appropriate maps if a topographic map is unavailable) that shows the following information. Maps should include the area one mile beyond all property boundaries of the facility: **See Figure 1.**
- Location of all sewage sludge management facilities, including locations where sewage sludge is generated, stored, treated, or disposed. **All sludge management facilities will be located within the facility's property boundaries.**
 - Location of all wells, springs, and other surface water bodies listed in public records or otherwise known to the applicant within 1/4 mile of the property boundaries. **A line that delineates the area within 1/4- mile of the facility's proposed boundary is shown on Figure 1. Beaver Creek and its tributaries are located within this radius of the facility. The figure also shows a portion of Beaver Creek Lake within this radius; however, field observations by CHA Consulting Inc. staff indicated that this is not a lake but an area that can serve as a flood control impoundment in the event of an extremely heavy flood event. Beaver Creek is normally a free-flowing stream.**
6. Line Drawing. Provide a line drawing and/or a narrative description that identifies all sewage sludge processes that will be employed during the term of the permit including all processes used for collecting, dewatering, storing, or treating sewage sludge, the destination(s) of all liquids and solids leaving each unit, and all methods used for pathogen reduction and vector attraction reduction. **See Figure 2.**
7. Contractor Information. Are any operational or maintenance aspects of this facility related to sewage sludge generation, treatment, use or disposal the responsibility of a contractor? X Yes No **Landfill disposal only**
If yes, provide the following for each contractor (attach additional pages if necessary).
Name: **BFI Carter's Valley Landfill**
Mailing address: **P.O. Box 234**
Street or P.O. Box:
City or Town: Church Hill State: TN Zip: 37642
Phone: 423-357-6777
Contractor's Federal, State or Local Permit Number(s) applicable to this facility's sewage sludge:
SNL # 37-104-0185
If the contractor is responsible for the use and/or disposal of the sewage sludge, provide a description of the service to be provided to the applicant and the respective obligations of the applicant and the contractor(s).
8. Pollutant Concentrations. Using the table below or a separate attachment, provide sewage sludge monitoring data for the pollutants which limits in sewage sludge have been established in 9 VAC 25-31-10 et seq. for this facility's expected use or disposal practices. All data must be based on three or more samples taken at least one month apart and must be no more than four and one-half years old. **A Certificate of Analysis for Hall Creek WWTP's TCLP results for metals, VOCs, and SVOCs is located in Attachment 1. The Western Washington County WRF is expected to be similar.**

POLLUTANT	CONCENTRATION (mg/kg dry weight)	SAMPLE DATE	ANALYTICAL METHOD	DETECTION LEVEL FOR ANALYSIS
Arsenic				
Cadmium				
Chromium				
Copper				
Lead				
Mercury				
Molybdenum				
Nickel				
Selenium				
Zinc				

9. Certification. Read and submit the following certification statement with this application. Refer to the instructions to determine who is an officer for purposes of this certification. Indicate which parts of the application you have

FACILITY NAME: Western Washington County Water Reclamation Facility VPDES PERMIT NUMBER: No permit completed and are submitting:

☒ Section A (General Information)

☒ Section B (Generation of Sewage Sludge or Preparation of a Material Derived from Sewage Sludge)

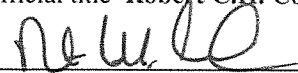
☐ Section C (Land Application of Bulk Sewage Sludge)

☐ Section D (Surface Disposal)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title **Robert C.H. Cornett, General Manager**

Signature



Date Signed

10 SEPT 2013

Telephone number (276) 628-7151

Upon request of the department, you must submit any other information necessary to assess sewage sludge use or disposal practices at your facility or identify appropriate permitting requirements.

**SECTION B. GENERATION OF SEWAGE SLUDGE OR PREPARATION
OF A MATERIAL DERIVED FROM SEWAGE SLUDGE**

Complete this section if your facility generates sewage sludge or derives a material from sewage sludge

1. Amount Generated On Site.
Total dry metric tons per 365-day period generated at your facility: ~60 (estimated) dry metric tons

2. Amount Received from Off Site. If your facility receives sewage sludge from another facility for treatment, use or disposal, provide the following information for each facility from which sewage sludge is received. If you receive sewage sludge from more than one facility, attach additional pages as necessary.
 - a. Facility name:
 - b. Contact Person:
Title:
Phone
 - c. Mailing address:
Street or P.O. Box:
City or Town: _____ State: _____ Zip: _____
 - d. Facility Address:
(not P.O. Box)
 - e. Total dry metric tons per 365-day period received from this facility: _____ dry metric tons.
 - f. Describe, on this form or on another sheet of paper, any treatment processes known to occur at the off-site facility, including blending activities and treatment to reduce pathogens or vector attraction characteristics:

3. Treatment Provided at Your Facility.
 - a. Which class of pathogen reduction is achieved for the sewage sludge at your facility?
☐ Class A ☒ Class B ☐ Neither or unknown
 - b. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce pathogens in sewage sludge: **Aerobic digestion, de-watering by gravity, and mechanical means.**
 - c. Which vector attraction reduction option is met for the sewage sludge at your facility?
☒ Option 1 (Minimum 38 percent reduction in volatile solids)
☐ Option 2 (Anaerobic process, with bench-scale demonstration)
☐ Option 3 (Aerobic process, with bench-scale demonstration)
☒ Option 4 (Specific oxygen uptake rate for aerobically digested sludge) if option 1 is not satisfied
☐ Option 5 (Aerobic processes plus raised temperature)
☐ Option 6 (Raise pH to 12 and retain at 11.5)
☐ Option 7 (75 percent solids with no unstabilized solids)
☐ Option 8 (90 percent solids with unstabilized solids)
☐ None or unknown
 - d. Describe, on this form or another sheet of paper, any treatment processes used at your facility to reduce vector attraction properties of sewage sludge: **Aerobic digestion to reduce vector attraction. Volatile reduction by 38%. De-watering by gravity or mechanical means further reduce volatiles 3-5%.**
 - e. Describe, on this form or another sheet of paper, any other sewage sludge treatment activities, including blending, not identified in a - d above: **None**

4. Preparation of Sewage Sludge Meeting Ceiling and Pollutant Concentrations, Class A Pathogen Requirements and One of Vector Attraction Reduction Options 1-8 (EQ Sludge).
 (If sewage sludge from your facility does not meet all of these criteria, skip Question 4.)
 - a. Total dry metric tons per 365-day period of sewage sludge subject to this section that is applied to the land: _____ dry metric tons
 - b. Is sewage sludge subject to this section placed in bags or other containers for sale or give-away?
☐ Yes ☐ No

5. Sale or Give-Away in a Bag or Other Container for Application to the Land. N/A

(Complete this question if you place sewage sludge in a bag or other container for sale or give-away prior to land application. Skip this question if sewage sludge is covered in Question 4.)

- a. Total dry metric tons per 365-day period of sewage sludge placed in a bag or other container at your facility for sale or give-away for application to the land: _____ dry metric tons
- b. Attach, with this application, a copy of all labels or notices that accompany the sewage sludge being sold or given away in a bag or other container for application to the land.

6. Shipment Off Site for Treatment or Blending. N/A

(Complete this question if sewage sludge from your facility is sent to another facility that provides treatment or blending. This question does not apply to sewage sludge sent directly to a land application or surface disposal site. Skip this question if the sewage sludge is covered in Questions 4 or 5. If you send sewage sludge to more than one facility, attach additional sheets as necessary.)

a. Receiving facility name:

b. Facility contact:

Title:

Phone: ()

c. Mailing address:

Street or P.O. Box:

City or Town: _____ State: _____ Zip:

d. Total dry metric tons per 365-day period of sewage sludge provided to receiving facility: _____ dry metric tons

e. List, on this form or an attachment, the receiving facility's VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the receiving facility's sewage sludge use or disposal practices:

Permit Number:

Type of Permit:

f. Does the receiving facility provide additional treatment to reduce pathogens in sewage sludge from your facility? ___Yes ___No

Which class of pathogen reduction is achieved for the sewage sludge at the receiving facility?

___Class A

___Class B

___Neither or unknown

Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce pathogens in sewage sludge:

g. Does the receiving facility provide additional treatment to reduce vector attraction characteristics of the sewage sludge? ___Yes ___No

Which vector attraction reduction option is met for the sewage sludge at the receiving facility?

___ Option 1 (Minimum 38 percent reduction in volatile solids)

___ Option 2 (Anaerobic process, with bench-scale demonstration)

___ Option 3 (Aerobic process, with bench-scale demonstration)

___ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)

___ Option 5 (Aerobic processes plus raised temperature)

___ Option 6 (Raise pH to 12 and retain at 11.5)

___ Option 7 (75 percent solids with no unstabilized solids)

___ Option 8 (90 percent solids with unstabilized solids)

___ None unknown

Describe, on this form or another sheet of paper, any treatment processes used at the receiving facility to reduce vector attraction properties of sewage sludge:

h. Does the receiving facility provide any additional treatment or blending not identified in f or g above? ___Yes ___No

If yes, describe, on this form or another sheet of paper, the treatment processes not identified in f or g above:

i. If you answered yes to f., g or h above, attach a copy of any information you provide to the receiving facility to comply with the "notice and necessary information" requirement of 9 VAC 25-31-530.G.

-

6

VI

9. Incineration. N/A

(Complete Question 9 if sewage sludge from your facility is fired in a sewage sludge incinerator.)

- a. Total dry metric tons per 365-day period of sewage sludge from your facility fired in a sewage sludge incinerator: _____ dry metric tons
- b. Do you own or operate all sewage sludge incinerators in which sewage sludge from your facility is fired?
☐ Yes ☐ No
 If no, answer questions c - g for each sewage sludge incinerator that you do not own or operate. If you send sewage sludge to more than one sewage sludge incinerator, attach additional pages as necessary.
- c. Incinerator name or number:
- d. Contact person:
 Title:
 Phone: ()
 Contact is: ☐ Incinerator Owner ☐ Incinerator Operator
- e. Mailing address.
 Street or P.O. Box:
 City or Town: _____ State: _____ Zip: _____
- f. Total dry metric tons per 365-day period of sewage sludge from your facility fired in this sewage sludge incinerator: _____ dry metric tons
- g. List on this form or an attachment the numbers of all other federal, state or local permits that regulate the firing of sewage sludge at this incinerator:
 Permit Number: _____ Type of Permit: _____

10. Disposal in a Municipal Solid Waste Landfill.

(Complete Question 10 if sewage sludge from your facility is placed on a municipal solid waste landfill. Provide the following information for each municipal solid waste landfill on which sewage sludge from your facility is placed. If sewage sludge is placed on more than one municipal solid waste landfill, attach additional pages as necessary.)

- a. Landfill name: BFI Carter Valley Landfill
- b. Contact person: Bruce A. Howard
 Title: Account Executive
 Phone: (423) 357-6677
 Contact is: ☒ Landfill Owner ☒ Landfill Operator
- c. Mailing address.
 Street or P.O. Box: P.O. Box 234
 City or Town: Church Hill State: TN Zip: 37642
- d. Landfill location.
 Street or Route #: 2825 Carter's Valley Road
 County: Hawkins
 City or Town: Church Hill State: TN Zip: 37642
- e. Total dry metric tons per 365-day period of sewage sludge placed in this municipal solid waste landfill:
58.7 dry metric tons
- f. List, on this form or an attachment, the numbers of all federal, state or local permits that regulate the operation of this municipal solid waste landfill:
 Permit Number: _____ Type of Permit: _____
SNL# 37-104-0185 Disposal of Special Waste
- g. Does sewage sludge meet applicable requirements in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq., concerning the quality of materials disposed in a municipal solid waste landfill?
☒ Yes ☐ No
- h. Does the municipal solid waste landfill comply with all applicable criteria set forth in the Virginia Solid Waste Management Regulation, 9 VAC 20-80-10 et seq.? ☒ Yes ☐ No
- i. Will the vehicle bed or other container used to transport sewage sludge to the municipal solid waste landfill be watertight and covered? ☒ Yes ☐ No
 Show the haul route(s) on a location map or briefly describe the route below and indicate the days of the week and time of the day sewage sludge will be transported. See Figure 3. Start out going northwest on Bordwine Road and turn left onto Wallace Pike. Continue straight to go onto Clear Creek Road which becomes Old Airport Road. Merge onto I-81 South into Tennessee. After 8 miles, merge onto US-11 W/TN-1 W (Exit 74B). Continue for ~30 miles, and then turn right onto Elm Springs Road. Continue for ~2 miles, and then turn left onto Carter's Valley Road.

Complete this section for sewage sludge that is land applied unless any of the following conditions apply:

The sewage sludge meets the Table 1 ceiling concentrations, the Table 3 pollutant concentrations, Class A pathogen requirements and one of the vector attraction reduction options 1-8 (fill out B.4 instead) (EQ Sludge); or

The sewage sludge is sold or given away in a bag or other container for application to the land (fill out B.5 instead); or

You provide the sewage sludge to another facility for treatment or blending (fill out B.6 instead).

Complete Section C for every site on which the sewage sludge that you reported in B.7 is land applied.

1. Identification of Land Application Site.

a. Site name or number:

b. Site location (Complete i and ii)

i. Street or Route#:

County:

City or Town: _____ State: _____ Zip:

ii. Latitude: _____ Longitude:

Method of latitude/longitude determination

_____ USGS map _____ Filed survey _____ Other

c. Topographic map. Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.

2. Owner Information.

a. Are you the owner of this land application site? ☐ Yes ☐ No

b. If no, provide the following information about the owner:

Name:

Street or P.O. Box:

City or Town: _____ State: _____ Zip:

Phone: () _____

3. Applier Information:

a. Are you the person who applies, or who is responsible for application of, sewage sludge to this land application site? ☐ Yes ☐ No

b. If no, provide the following information for the person who applies the sewage sludge:

Name:

Street or P.O. Box:

City or Town: _____ State: _____ Zip:

Phone: () _____

c. List, on this form or an attachment, the numbers of all federal, state or local permits that regulate the person who applies sewage sludge to this land application site:

Permit Number:

Type of Permit:

4. Site Type. Identify the type of land application site from among the following:

☐ Agricultural land

☐ Reclamation site

☐ Forest

☐ Public contact site

☐ Other. Describe

5. Vector Attraction Reduction.

Are any vector attraction reduction requirements met when sewage sludge is applied to the land application site?

☐ Yes ☐ No If yes, answer a and b.

a. Indicate which vector attraction reduction option is met:

☐ Option 9 (Injection below land surface)

☐ Option 10 (Incorporation into soil within 6 hours)

b. Describe, on this form or on another sheet of paper, any treatment processes used at the land application site to reduce the vector attraction properties of sewage sludge:

6. Cumulative Loadings and Remaining Allotments.

a. Have you contacted DEQ or the permitting authority in the state where the sewage sludge subject to the CPLRs will be applied to ascertain whether bulk sewage sludge subject to the CPLRs has been applied to this site since July 20, 1993? ☐ Yes ☐ No

If yes, provide the following information:

Contact person:

b. Based upon this inquiry, has bulk sewage sludge subject to the CPLRs been applied to this site since July 20, 1993? ☐ Yes ☐ No If no, skip the rest of Question 6. If yes, answer questions c - e.

d. Provide the following information for every facility other than yours that is sending or has sent sewage sludge subject to the CPLRs to this site since July 20, 1993. If more than one such facility sends sewage sludge to this site, attach additional pages as necessary.

City or Town: _____ State: _____ Zip: _____

Allotment remaining

Zinc

7. **Sludge Characterization.** Use the table below or a separate attachment, provide at least one analysis for each parameter.

Alkalinity as CaCO_3^* (mg/kg)

Page 10 of 16

8. Storage Requirements.

Existing and proposed sludge storage facilities must provide an estimated annual sludge balance on a monthly basis incorporating such factors as storage capacity, sludge production and land application schedule. Include pertinent calculations justifying storage requirements.

Proposed sludge storage facilities must also provide the following information:

- a. A sludge storage site layout on a 7.5 minute topographic quadrangle or other appropriate scaled map to show the following topographic features of the surrounding landscape to a distance of 0.25 mile. Clearly mark the property line.
 - 1) Water wells, abandoned or operating
 - 2) Surface waters
 - 3) Springs
 - 4) Public water supply(s)
 - 5) Sinkholes
 - 6) Underground and/or surface mines
 - 7) Mine pool (or other) surface water discharge points
 - 8) Mining spoil piles and mine dumps
 - 9) Quarry(s)
 - 10) Sand and gravel pits
 - 11) Gas and oil wells
 - 12) Diversion ditch(s)
 - 13) Agricultural drainage ditch(s)
 - 14) Occupied dwellings, including industrial and commercial establishments
 - 15) Landfills or dumps
 - 16) Other unlined impoundments
 - 17) Septic tanks and drainfields
 - 18) Injection wells
 - 19) Rock outcrops
- b. A topographic map of sufficient detail to clearly show the following information:
 - 1) Maximum and minimum percent slopes
 - 2) Depressions on the site that may collect water
 - 3) Drainageways that may attribute to rainfall run-on to or runoff from this site
 - 4) Portions of the site (if any) which are located with the 100-year floodplain and how the storage facility will be protected from flooding
- c. Data and specifications for the storage facility lining material.
- d. Plan and cross-sectional views of the storage facility.
- e. Depth from the bottom of the storage facility to the seasonal high water table and separation distance to the permanent water table.

9. Land Area Requirements. Provide calculations justifying the land area requirements for land application of sewage sludge taking into consideration average soil productivity group, crop(s) to be grown and most limiting factor(s) of the sewage sludge, specifically Plant Available Nitrogen (PAN), Calcium Carbonate Equivalence (CCE), and metal loadings (CPLR sewage sludge only), where applicable. Relate PAN, CCE, and metal loadings to demonstrate the most limiting factor for land application.

10. Landowner Agreement Forms. Provide a properly completed Sewage Sludge Application Agreement Form (attached) for each landowner if sewage sludge is to be applied onto land not owned by the applicant.

11. Ground Water Monitoring.

Are any ground water monitoring data available for this land application site? ☐ Yes ☐ No

If yes, submit the ground water monitoring data with this permit application. Also submit a written description of the well locations, approximate depth to ground water, and the ground water monitoring procedures used to obtain these data.

12. Land Application Site Information.

(Complete Items a-d for sites receiving infrequent application - land application of sewage sludge up to the agronomic rate at a frequency of once in a 3 year period; complete Items a-h for sites receiving frequent application - land application of sewage sludge in excess of 70% the agronomic rate at a frequency greater than once in a 3 year period)

FACILITY NAME: Western Washington County Water Reclamation Facility **VPDES PERMIT NUMBER:** No permit

- a. Provide a general location map for each county which clearly indicates the location of all the land application sites.
- b. For each land application site provide a site plan of sufficient detail to clearly show the concerned landscape features and associated buffer zones (See instructions). Provide a legend for each landscape feature and the net acreage for each field taking into account the proposed buffer zones.
- c. In order to ensure that land application of bulk sewage sludge will not impact federally listed threatened or endangered species or federally designated critical habitat, the applicant must notify the field office of the U. S. Department of the Interior, Fish and Wildlife Service (FWS), by a letter, the proposed land application activities with the identification of the land application sites. The address and phone number of FWS are provided below.

U. S. Fish and Wildlife Service
Virginia Field Office
P. O. Box 480
White Marsh, VA 23183
TEL: (804)693-6694

Provide a copy of the notification letter with this application form.

- d. Provide a soil survey map, preferably photographically based, with the field boundaries clearly marked. (A USDA-SCS soil survey map should be provided, if available.)
Provide a detailed legend for each soil survey map which uses accepted USDA-SCS descriptions of the typifying pedon for each soil series (soil type). Complex associations may be described as a range of characteristics. Soil descriptions shall include as a minimum the following information.
 - 1) Soil symbol
 - 2) Soil series, textural phase and slope range
 - 3) Depth to seasonal high water table
 - 4) Depth to bedrock
 - 5) Estimated soil productivity group (for the proposed crop rotation)

Item e - h are required for sites receiving frequent application of sewage sludge

- e. In order to verify the information provided in item d, characterize the soil at each land application site. Representative soil borings or test pits to a depth of five feet or to bedrock if shallower, are to be coordinated for the typifying pedon of each soil series (soil type). Soil descriptions shall include as a minimum the following information:
 - 1). Soil symbol
 - 2). Soil series, textural phase and slope range
 - 3). Depth to seasonal high water table
 - 4). Depth to bedrock
 - 5). Estimated soil productivity group (for the proposed crop rotation)

- f. Collect and analyze soil samples from each field, weighted to best represent each of the soil borings performed for Item e. Using the table below or a separate attachment, provide at least one analysis per sample for each of the following parameters.

Soil Organic Matter (%)
Soil pH (std. units)
Cation Exchange Capacity (meq/100g)
Total Nitrogen (ppm)
Organic Nitrogen (ppm)
Ammonia Nitrogen (ppm)
Nitrate Nitrogen (ppm)
Available Phosphorus (ppm)
Exchangeable Potassium (mg/100g)
Exchangeable Sodium (mg/100g)
Exchangeable Calcium (mg/100g)
Exchangeable Magnesium (mg/100g)
Arsenic (ppm)
Cadmium (ppm)
Copper (ppm)
Lead (ppm)
Mercury (ppm)
Molybdenum (ppm)
Nickel (ppm)
Selenium (ppm)
Zinc (ppm)
Manganese (ppm)
Particle Size Analysis or
USDA Textural Estimate (%)

- g. Relate the crop nutrient needs to anticipated yields, soil productivity rating and the various fertilizer or nutrient sources from sludge and chemical fertilizers. Describe any specialized agronomic management practices which may be required as a result of high soil pH. If the sludge is expected to possess an unusually high CCE or other unusual properties, provide a description of any plant tissue testing, supplemental fertilization or intensive agronomic management practices which may be necessary.
- h. Using a narrative format and referencing any related charts, describe the proposed cropping system. Show how the crop rotation and management will be coordinated with the design of the land application system. Include any supplemental fertilization program, soil testing and the coordination of tillage practices, planting and harvesting schedules and timing of land application.

SEWAGE SLUDGE APPLICATION AGREEMENT N/A

his sewage sludge application agreement is made on this date _____ between _____, referred to here as "landowner", and _____, referred to here as the "Permittee".

Landowner is the owner of agricultural land shown on the map attached as Exhibit A and designated there as _____ ("landowner's land"). Permittee agrees to apply and landowner agrees to comply with certain permit requirements following application of sewage sludge on landowner's land in amounts and in a manner authorized by VPDES permit number _____ which is held by the Permittee.

Landowner acknowledges that the appropriate application of sewage sludge will be beneficial in providing fertilizer and soil conditioning to the property. Moreover, landowner acknowledges having been expressly advised that, in order to protect public health, the following site restrictions must be adhered to when sewage sludge receives Class B treatment for pathogen reduction:

1. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge;
2. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for four months or longer prior to incorporation into the soil;
3. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than four months prior to incorporation into the soil;
4. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge;
5. Animals shall not be grazed on the land for 30 days after application of sewage sludge;
6. Turf grown on land where sewage sludge is applied shall not be harvested for one year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the State Water Control Board;
7. Public access to land with a high potential for public exposure shall be restricted for one year after application of sewage sludge;
8. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.
9. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of sewage sludge borne cadmium equal to or exceeding 0.5 kilograms/hectare (0.45 pounds/acre).

Permittee agrees to notify landowner or landowner's designee of the proposed schedule for sewage sludge application and specifically prior to any particular application to landowner's land. This agreement may be terminated by either party upon written notice to the address specified below.

Landowner:

Signature

Mailing Address

Permittee:

Signature

Mailing Address

SECTION D. SURFACE DISPOSAL N/A

Complete this section only if you own or operate a surface disposal site. Provide the information for each active sewage sludge unit.

1. Information on Active Sewage Sludge Units.

- a. Unit name or number:
- b. Unit location
 - i. Street or Route#:
County:
City or Town: _____ State: _____ Zip: _____
 - ii. Latitude: _____ Longitude: _____
Method of latitude/longitude determination
_____ USGS map _____ Filed survey _____ Other _____
- c. Topographic map. Provide a topographic map (or other appropriate map if a topographic map is unavailable) that shows the site location.
- d. Total dry metric tons of sewage sludge placed on the active sewage sludge unit per 365-day period:
_____ dry metric tons.
- e. Total dry metric tons of sewage sludge placed on the active sewage sludge unit over the life of the unit:
_____ dry metric tons.
- f. Does the active sewage sludge unit have a liner with a minimum hydraulic conductivity of 1×10^{-7} cm/sec? ☐ Yes ☐ No If yes, describe the liner or attach a description.
- g. Does the active sewage sludge unit have a leachate collection system? ☐ Yes ☐ No
If yes, describe the leachate collection system or attach a description. Also, describe the method used for leachate disposal and provide the numbers of any federal, state or local permits for leachate disposal:
- h. If you answered no to either f or g, answer the following:
Is the boundary of the active sewage sludge unit less than 150 meters from the property line of the surface disposal site? ☐ Yes ☐ No If yes, provide the actual distance in meters:
- i. Remaining capacity of active sewage sludge unit, in dry metric tons: _____ dry metric tons
Anticipated closure date for active sewage sludge unit, if known: _____ (MM/DD/YYYY)
Provide with this application a copy of any closure plan developed for this active sewage sludge unit.

2. Sewage Sludge from Other Facilities.

Is sewage sludge sent to this active sewage sludge unit from any facilities other than yours? ☐ Yes ☐ No
If yes, provide the following information for each such facility, attach additional sheets as necessary.

- a. Facility name:
- b. Facility contact:
Title:
Phone: () _____
- c. Mailing address.
Street or P.O. Box:
City or Town: _____ State: _____ Zip: _____
- d. List, on this form or an attachment, the facility's VPDES permit number as well as the numbers of all other federal, state or local permits that regulate the facility's sewage sludge management practices:
Permit Number: _____ Type of Permit: _____

- e. Which class of pathogen reduction is achieved before sewage sludge leaves the other facility?
☐ Class A ☐ Class B ☐ Neither or unknown
- f. Describe, on this form or on another sheet of paper, any treatment processes used at the other facility to reduce pathogens in sewage sludge:

- g. Which vector attraction reduction option is achieved before sewage sludge leaves the other facility?
- ☐ Option 1 (Minimum 38 percent reduction in volatile solids)
 - ☐ Option 2 (Anaerobic process, with bench-scale demonstration)
 - ☐ Option 3 (Aerobic process, with bench-scale demonstration)
 - ☐ Option 4 (Specific oxygen uptake rate for aerobically digested sludge)
 - ☐ Option 5 (Aerobic processes plus raised temperature)
 - ☐ Option 6 (Raise pH to 12 and retain at 11.5)
 - ☐ Option 7 (75 percent solids with no unstabilized solids)
 - ☐ Option 8 (90 percent solids with unstabilized solids)
 - ☐ None or unknown
- h. Describe, on this form or another sheet of paper, any treatment processes used at the other facility to reduce vector attraction properties of sewage sludge:
- i. Describe, on this form or another sheet of paper, any other sewage sludge treatment activities performed by the other facility that are not identified in e - h above:

3. Vector Attraction Reduction.

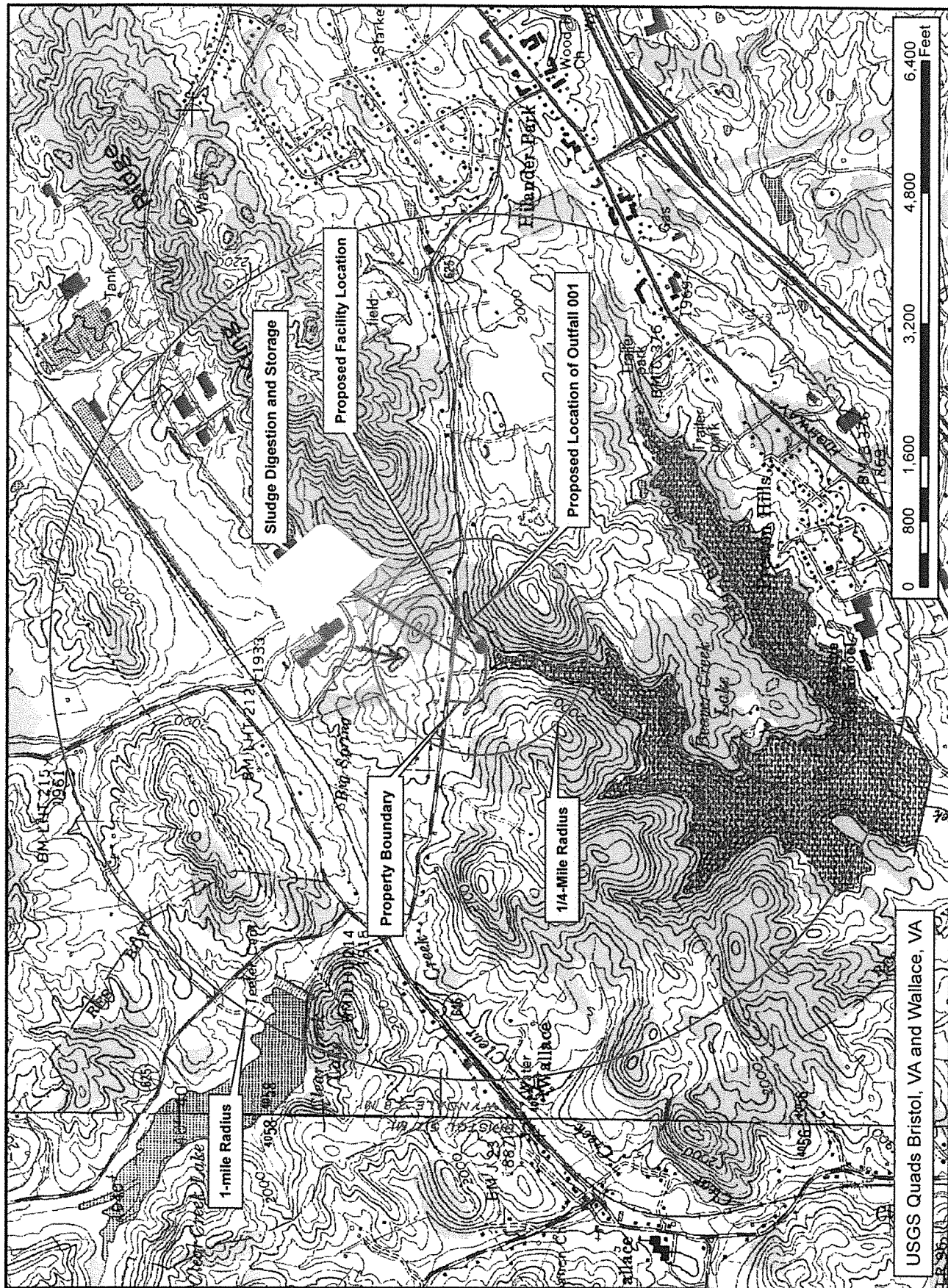
- a. Which vector attraction reduction option, if any, is met when sewage sludge is placed on this active sewage sludge unit?
- ☐ Option 9 (Injection below land surface)
 - ☐ Option 10 (Incorporation into soil within 6 hours)
 - ☐ Option 11 (Covering active sewage sludge unit daily)
- b. Describe, on this form or another sheet of paper, any treatment processes used at the active sewage sludge unit to reduce vector attraction properties of sewage sludge:

4. Ground Water Monitoring.

- a. Is ground water monitoring currently conducted at this active sewage sludge unit or are ground water monitoring data otherwise available for this active sewage sludge unit? ☐ Yes ☐ No
If yes, provide a copy of available ground water monitoring data. Also provide a written description of the well locations, the approximate depth to ground water, and the ground water monitoring procedures used to obtain these data.
- b. Has a ground water monitoring program been prepared for this active sewage sludge unit?
☐ Yes ☐ No If yes, submit a copy of the ground water monitoring program with this application.
- c. Have you obtained a certification from a qualified ground water scientist that the aquifer below the active sewage sludge unit has not been contaminated? ☐ Yes ☐ No
If yes, submit a copy of the certification with this application.

5. Site-Specific Limits.

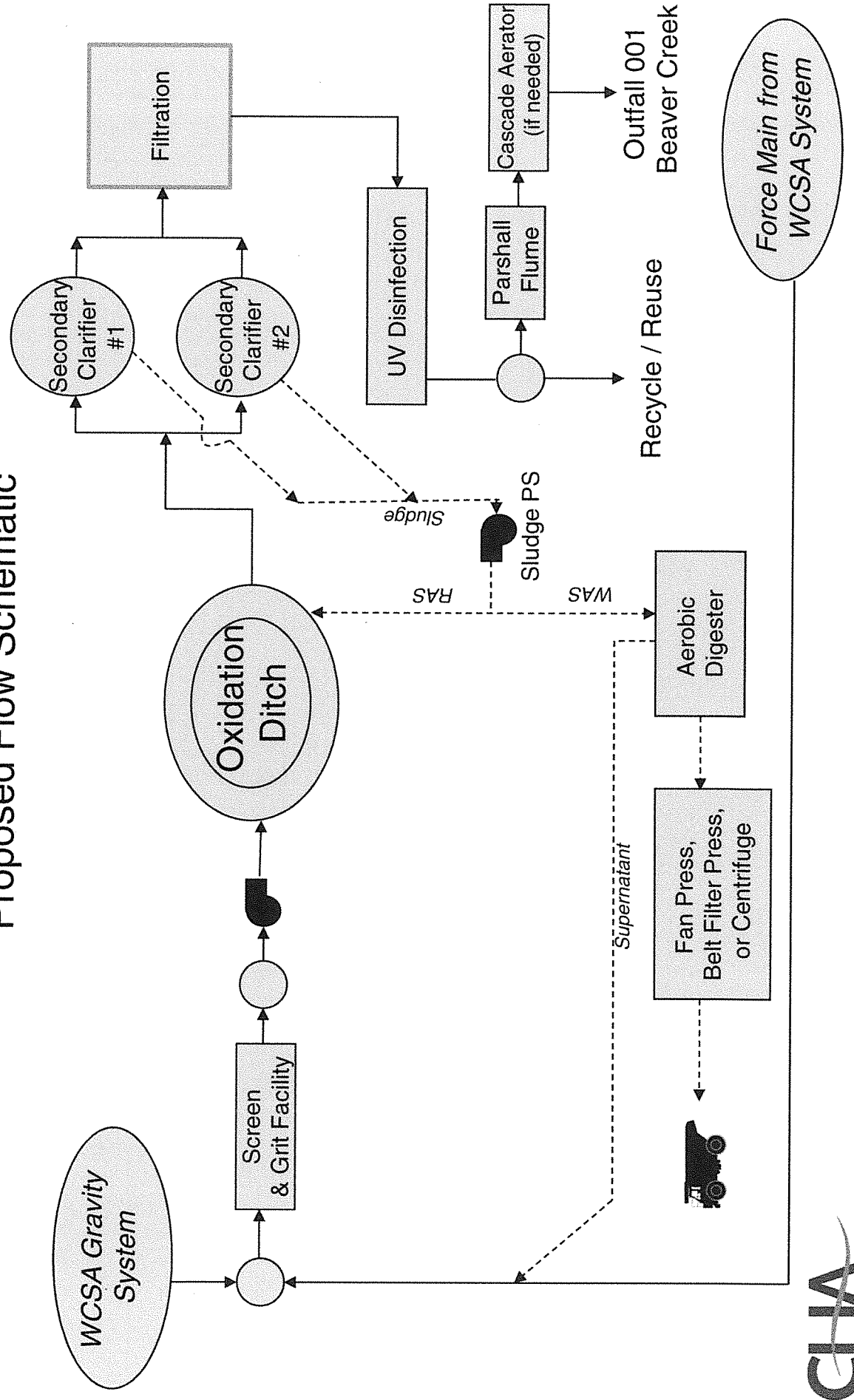
- Are you seeking site-specific pollutant limits for the sewage sludge placed on the active sewage sludge unit?
☐ Yes ☐ No If yes, submit information to support the request for site-specific pollutant limits with this application.

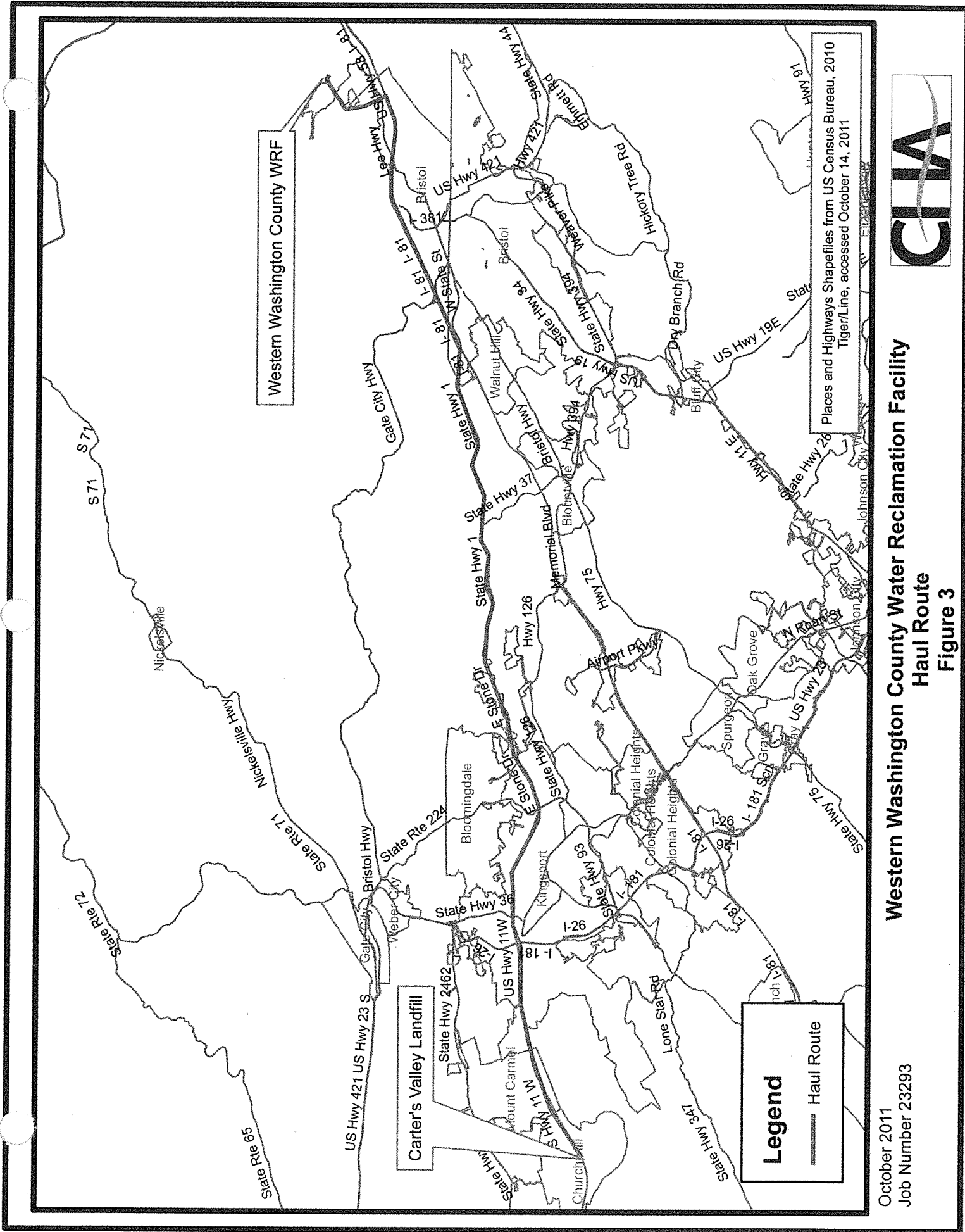


Western Washington County Water Reclamation Facility
Approximate Site Location Map

Figure 1

Western Washington County Water Reclamation Facility





Western Washington County Water Reclamation Facility
Haul Route
Figure 3